**TASK FORCE 4: ELIMINATION OF SILICOSIS**

Co-Chairs: Igor Fedotov, ILO (fedotov@ilo.org) and Gregory Goldstein, WHO (goldsteing@who.int)

The ILO/WHO Joint Committee on Occupational Health launched in 1995 a Global Programme on the Elimination of Silicosis from the world by 2030. The objective of this Task Force is to further develop and implement this programme, to encourage every country to develop its own national silicosis elimination programme, and to provide a knowledge base for countries that wish to launch a national programme. Prevention of pneumoconioses other than silicosis may be included as a part of the programmes at the regional and country levels, because occupational exposures to different kinds of dusts are widespread and the prevention and control activities for various pneumoconioses are to some extent related.

Preparation of a brochure to publicize the global programme on elimination of silicosis for mobilizing the international donor communities

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**Keywords:** brochure, disease elimination, silicosis, global programme

**Target group:** decision-makers, planners and managers, and occupational health staff in Departments of Health, Departments of Labour, and Trade Unions in all countries with a known or suspected silicosis risk.

The objective of this project is to raise awareness among decision-makers in Departments of Health, Departments of Labour, Trade Unions, companies and enterprises associated with a risk of silicosis on the magnitude of the silicosis problem, and to demonstrate that the elimination of silicosis is a worthwhile and feasible objective, now being pursued by a global coalition, that they should support. A brochure will be prepared which will cover an introduction to silicosis, the global silicosis situation in developed and developing countries, a brief review of the established approaches to prevention, and a brief history of the global programme to eliminate silicosis with a list of programme elements.

A draft outline of the proposed brochure has already been prepared, with content and format defined, and is now under review. Suitable photographs to illustrate the text are being sought. Funding for the project is in place. It is scheduled to be completed by December 2003.

Development of simple dust control technologies widely applicable to various industries, in developing countries in particular

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**Keywords:** Preventative Technologies Toolbox pneumoconioses, occupational hygiene, work-related illness, Dust Control Toolkit, training, technologies.

**Target group:** All interested CCs over and beyond those who have currently expressed interest, managers, team leaders and miners, and occupational health and safety staff in two coal enterprises associated with a risk of silicosis and coal miners’ pneumoconiosis.

The objective of this project is to disseminate knowledge on the principles and prevention of dust generation and control, and to promote the application of this knowledge into practical control solutions, by trade and occupational sector, applicable in developing countries and countries in transition. The dissemination is to include managers, technical teams and miners in two coal mines aiming at elimination of silicosis and coal miners’ pneumoconiosis. The aim is to develop these technologies to be included as a Dust Control Toolkit in the Preventative Technologies Toolbox. This process will include control banding principles, substitution, clean technologies, and other practical solutions.

The progress so far has been the coordination of two-day symposia on silicosis to focus on practical solutions and dust control principles, to be presented in association with the ICOH Congress in February 2003. The culmination of the information associated with this symposium will be a starting point for ongoing collaboration between IOHA and WHO in the collecting of practical solutions and case studies. This process will enrich the WHO document through practical experience acquired through the IOHA and the expertise found within.

A pamphlet of practical control technologies, by trade and occupational sector, for use in developing countries and countries in transition, has been prepared. Training courses on the application of simple dust
control technologies in two coalmines are planned. A project proposal has just been approved by the funding body.

The centres collaborating on this project are: Japan (NIIH), China (Dept OH + IQM), Viet Nam (NIOEH), Chile (ACHS), Thailand (NICE + Dept. of PH), Russia (SCIOH), Bulgaria (NCHM), Serbia and Montenegro (IOPH), South Africa (NCOH) and India (NIOH).

**Development of conventional technologies of dust measurement and control and training occupational hygienists in developing countries**

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**Keywords**: X-ray diffraction method (XRD), work environment, silica dust, occupational hygienists, developing countries.

**Target group**: 1) National Institute for the Improvement of Working Conditions and Environment (NICE) that is an agency under the Department of Labour Protection and Welfare, Ministry of Labour and Social Welfare, Thailand. 2) National Institute of Occupational Safety and Health (NIOSH) in Malaysia.

The purpose of the project is the development of conventional methods of silica measurement that can be used for the control of work environment in developing countries. 2) Introducing the methods to occupational hygienists in developing countries.

Crystalline silica dust is a main causative material for silicosis of miners, tunnel and construction workers, etc. Measurement of silica dust in work place is the first step to control silicosis. XRD and IR methods are most effective for evaluation of silica dust, but the techniques are sometimes difficult and expensive for beginners. The first objective of this project is to develop some cheap and convenient techniques of XRD and Infrared (IR) method which are required in many countries, especially in developing countries.

The second objective of this project is to teach the developed methods to occupational hygienists and environmental measurement experts in developing countries.

The developed XRD method was tested for three forms of crystalline silica; quartz, cristobalite and tridymite, and confirmed for the availability. The types of crystalline silica formed from rice husk ash, a major residue of rice production in South Asian countries, were identified and quantified using the XRD and other methods. Final evaluation is in progress.

Under the joint project supported by JICA (Japan International Cooperation Agency), an instrument of XRD was introduced in NICE and NIOSH, 2000 and 2001, respectively, and we have conducted the training courses. Technical support has been continued via Internet communication with a trained hygienist in NIOSH since 2002. By sharing information obtained by XRD analysis, it becomes easy to advise the definite analytical method that can be used for the control of work environment.

**Contributing information on interventions to reduce silica exposure**

Charles Levenstein, University of Massachusetts at Lowell (chucklev@aol.com)

Substantial progress has been reported in relation to 3 initiatives:

1. **Development of Measures of Silica Exposure in Construction**

Dr. Susan Woskie, Associate Professor of Industrial Hygiene in the Work Environment Department is undertaking a continued study of silica exposure of construction workers on the “Big Dig” in Boston, Massachusetts.

2. **Policy Approaches to Silicosis Prevention**

This initiative is led by Dr. Beth Rosenberg, Assistant Professor of Occupational Health at Tufts University School of Medicine (in collaboration with Prof. Charles Levenstein). Dr. Rosenberg’s petition to the Massachusetts Toxins Use Reduction Institute to list crystalline silica as a toxic substance has been successful. The effort has been aimed at reducing substantially, if not totally eliminating, the use of silica in abrasive blasting in private sector manufacturing in Massachusetts. In addition, all firms producing substantial amounts of hazardous waste in the state will be required to report data on use of crystalline silica. The Tufts-Lowell Silicosis Prevention Advisory Board, composed of public health officials, academic researchers and trade union representatives will be discussing next steps.

Dr Rosenberg is examining economic and ergonomic aspects of using alternatives to silica in abrasive blasting. This project, now in progress, focuses on case studies of economic aspects of replacement of silica with substitutes in abrasive blasting, as well as changes in ergonomic stressors in using alternative technologies. The target audience is abrasive blasters.

3. **Cost Effectiveness of Silicosis Prevention Initiatives**
Pilot introduction of the Programme "Good Practice in health, environment and social capital management in enterprises" (GP HESME) in the Republic of Bashkortostan

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**Keywords:** occupational health, workplace, health promotion and management


The purpose of the project is the adaptation of the European model of health, environment and social capital management in enterprises tested in an oil-gas extracting enterprise to make a decision on the possibility of the model use in enterprises of various economic branches.

The main distinguishing feature of the management model is an integrated approach to health promotion of the working population with the active participation of an employee, employer, as well as different state, public and scientific structures associated with this problem. The major condition of the model introduction is participation of the employer in promotion of health, life style, favourable work conditions and healthy environment including policy that is being implemented by the top manager and his colleagues. The aim is to change traditional ideas about determinants of the working population health. The project consists of analysis and evaluation not only of factors of work environment and work process but socioeconomic, sociopsychologic and sociohygienic factors determining life quality and human health.

Pilot investigations into the introduction of the European model of health, environment and safety management in enterprises, applied in the “Yuzhrlanneft” oil-gas extracting enterprise, have been carried out. The results obtained have been discussed at the International working meeting with the participation of the WHO Regional Adviser in Occupational Health Dr. Rosenberg and Professor Levenstein; and Dr. Marilyn Fingerhut, WHO, Geneva) is conducting a review of available data on effectiveness of silicosis prevention interventions, including substitution, engineering and administrative controls, use of personal protective equipment, training, and policy approaches. The project also includes estimations of costs of various programmes, and extrapolation of available data to make national and global estimates of cost effectiveness.

Пилотное исследование по внедрению Европейской модели управления здоровьем, окружающей средой и безопасностью в условиях производства

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**Ключевые слова:** Медицина труда, рабочее место, формирование и управление здоровьем

*Исполнители:* Уфимский НИИ медицины труда и экологии человека, НИИ медицины труда РАМН (г. Москва), Министерство здравоохранения Республики Башкортостан, Министерство труда и социальной защиты населения РБ, Региональное отделение Фонда социального страхования, Фонд медицинского страхования, Государственный комитет РБ по статистике

**Цель проекта:** Адаптация европейской модели управления здоровьем, окружающей средой и безопасностью в условиях производства на примере нефтегазо-добывающего предприятия для принятия решения о возможности использования модели в производствах различных отраслей экономики

**Краткое содержание проекта (абстракт)**

Главной отличительной чертой разрабатываемой модели управления является комплексный подход к формированию здоровья трудоспособного населения с активным участием в этом процессе самого работника, работодателя, а также различных государственных, общественных и научно-исследовательских структур, имеющих отношение к данной проблеме.
Facilitating interaction between Collaborating Centres and providing information on dust control technologies

Paul Schulte, NIOSH, USA (pschulte@cdc.gov)

The objective of this project is to facilitate interaction between Collaborating Centre, NIOSH divisions and the United States Silicosis Prevention Initiative partners (OSHA, MSHA, National Industrial Sand Association) to provide information on simple and effective dust control technologies, including best practices, and to contribute materials from the silicosis prevention initiative, such as educational materials and dust sampling strategies. Funding for this on-going project is in place.

Updating WHO guidelines on health surveillance of silica-exposed workers

Gregory Wagner, NIOSH, USA (GWagner@cdc.gov)

Keywords: silicosis; screening; secondary prevention; surveillance; pneumoconiosis

Target group: physicians, public health workers, ministries of health, employers, employee organizations, trade associations

The objective of this project is to assist in updating the WHO guidelines on health surveillance of silica-exposed workers. It aims to continue to assist WHO and ILO in training occupational health physicians to recognize silicosis.

In 1996, the WHO published a monograph providing guidance on "Screening and Surveillance of Workers Exposed to Mineral Dusts." The monograph was the result of an extensive, extended collaborative process reflecting a high level of cooperation between the WHO and the ILO and of involving experts from over a dozen countries. One of the primary goals of the current task is to update the guidelines laid out in the monograph to reflect experience using the guidelines and scientific developments since its production. In addition, there is a continuing effort to train physicians and other public health workers in approaches and techniques, reflecting current guidance, that will improve screening and surveillance of workers exposed to crystalline silica as part of the overall effort to develop and implement national programmes for silicosis elimination.

Scientific research likely to lead to improved recommendations is continuing. The revision of the ILO system for classification of radiographs for pneumoconiosis, a central part of the guidelines, has been completed and is publicly available. There is continuing participation in national Training Courses in silicosis prevention sponsored by the ILO and WHO, most recently in Viet Nam in April 2002.

Funding is in place. The project will be completed by December 2005.

A hazard review document on silica

Faye Rice, NIOSH, USA (FRice@cdc.gov)
**Target Group:** workers, occupational health and safety scientists, physicians, epidemiologists, regulators, policy makers, industrial hygienists, analytical chemists, and all who need knowledge of the adverse health effects of respirable crystalline silica.

The aim of this project is to contribute a hazard review document on silica and perform a number of quantitative risk assessments. The NIOSH Hazard Review examines the health risks and diseases associated with occupational exposure to respirable crystalline silica, discusses findings from recent epidemiological studies, and suggests areas for further research to help answer ongoing questions about the hazards of exposure. Quantitative risk assessments will examine excess lifetime risks of lung cancer and lung disease other than cancer in a cohort of U.S. diatomaceous earth workers.

The NIOSH Hazard Review was published May 2002, the Risk Assessment for lung diseases other than cancer in January 2002 and the Lung Cancer Risk assessment in January 2001. The two quantitative risk assessments were published in *Occupational and Environmental Medicine* Volumes 58 (lung cancer) & 59 (lung disease other than cancer). The risk assessment of radiographic silicosis in three pooled cohorts is in progress. The foreseen date for completion and publication of that risk assessment is December 2004. Funding for this project is in place.

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**The Evaluation of Silica Exposure in the Foundry**

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*Keywords:* silica, foundry, exposure, pneumoconiosis, silicosis

The objective of this project is to evaluate the silica exposure level for foundry workers and to provide the appropriate control strategy. The project will cover the 30 foundries located in Incheon Area, Korea. The airborne silica levels are evaluated for the process of melting, coremaking, moulding, and finishing. The appropriate control strategy will be provided for the high-risk group.

The first survey was started jointly with the Korean Occupational Safety and Health Agency (KOSHA) and is now undertaking a first report.

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**Research on silica dust, lung function and silicosis, and a model programme for integrated prevention of dust exposure and surveillance of respiratory health**

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*Keywords:* lung function, silicosis, surveillance, longitudinal tracking

*Target group:* occupational health practitioners on the mines including medical, nursing, occupational hygiene and environmental engineering personnel. Also personnel in the public sector inspectorates and compensation authorities.

The purpose of this project to develop longitudinal lung function tracking software for surveillance programmes on mines that is more sensitive for prevention of silicosis and other lung diseases among mineworkers, and to evaluate current respiratory and dust surveillance programmes on the mines with a view to optimising their functioning in the service of prevention.

Surveillance systems will be studied for dust and respiratory disease. Cross-sectional data for lung function will be analysed with respect to exposures in the gold and platinum sectors. Longitudinal data for lung function will be analysed against dust exposures for same. Data sources will be routine surveillance and also special surveys set up to investigate exposure response relationships. Software tracking lung function changes over time in miners based on longitudinal data generated by unexposed workers will be used to develop adaptive reference ranges making best use of repeat longitudinal surveillance data to detect abnormal deterioration in lung function as early as possible.

Currently data available from routine and special survey sources is being analysed with a view to establishing exposure response relationships in the gold and platinum sectors. Information about surveillance systems for dust and respiratory health is being sought internationally in order to identify effective and efficient systems that integrate the two components in a meaningful manner.

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**Provision of a model national programme with indicators addressing the size of the silicosis problem and progress of the national programme**

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*Keywords:* dust monitoring, health surveillance, diagnosis of silicosis, control technologies, training

*Target group:* decision-makers, planners and managers, occupational health personnel
The objective of this project is to provide a model national programme which aims at the elimination of silicosis and coal miners' pneumoconiosis. Based on the magnitude of the silicosis problem and given that the elimination of silicosis is a worthwhile and feasible objective, now being pursued by a global coalition, a model national programme aiming at elimination of silicosis is being developed. The important indicators of a model national programme will be selected to address the magnitude of the problem of silicosis and coal miners' pneumoconiosis, and the progress of dust control. A project proposal has been approved by the funding bodies, the Chinese Ministry of Health and the Chinese Ministry of Science and Technology. The ILO and the Chinese Ministries of Health and of Science and Technology are collaborating on the project. It is scheduled to be completed by 2005.

Training in respiratory dust monitoring at workplace

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*Keywords:* dust, training, monitoring

*Target Group:* Occupational hygienists in mineral dust exposed industries

The purpose is to train in application of personal sampling technique for respiratory dust monitoring. This is an on-going project for the period 2002-2003. Two training courses have been held. The third training course is in the planning stage. Funding from WPRO/WHO is in place.

Contribution to the organizing activities for hosting 'The Tenth International Conference on Occupational Respiratory Diseases' to be held in Beijing in 2005

Fengsheng He, National Institutes in Occupational Health and Poison Control, China
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*Target Group:* Occupational health professionals

The purpose is to help ILO and the Chinese Ministry of Health in organizing the Congress. The ILO and the Chinese Ministry of Health are responsible for the organizing activities. This Centre is involved in some preparatory work for scientific committee.

Announcement:
www.who.int/oeh/OCHweb/OCHweb/OSHpages/Welcome/Conference_China.pdf

Inquiry on silicosis in Tunisia

Habib Nouaigui and Leila Daly, Institute of Health and Security at Work, Tunisia

*Keywords:* silicosis, mines.

*Target group:* miners (of lead, zinc and iron mines)

The objective of this project is to determine the prevalence of silicosis in Tunisia. It is a comprehensive and exhaustive epidemiological study aiming to determine the prevalence of silicosis in iron, lead and zinc mines in the North West of Tunisia.

Tracking was done by first taking X-rays of the thorax (10 X 10). Standard X-rays were then asked for in cases of suspected silicosis, with spirometrics, questionnaire and clinical checkup for respiratory reasons. The inquiry was made in collaboration with the pneumonology services of the Ariana Hospital of Tunis, during the period 2001/2002. The X-ray tracking involved 79% of the 571 workers of the mining society.

In 99 cases, a standard X-ray of the thorax was requested. It identified 11 cases of silicosis (prevalence = 2.4%). The characteristics of the touched population are: average age = 56 yrs; average exposure time = 23 years in depth; 8/11 occupied a job in drilling. The X-ray image observed was very advanced in one case (3/3 pp UML), advanced in 7 cases (1/2, 2/1, 2/2 ppUML) and just beginning in 3 cases (1/1 pp). In two cases, effects of tuberculosis were present. The silicotics were banished from exposure.

This inquiry, which is registered in the framework of tracking silicosis undertaken regularly at national level since the 1970s, shows a definite regression of this pathology in the mines of the North West with a prevalence which decreased from 7% in 1984 to 2.4% in 2002.

Enquête sur la silicose en Tunisie

Habib Nouaigui et Leila Daly, Institut de Santé et de Sécurité au Travail, Tunisie

*Mots clés:* silicose, mine.

*Cible:* mineurs (mines de plomb, zinc et fer)

L'objectif de ce projet est de déterminer la prévalence de silicose en Tunisie. Il s'agit d'une enquête épidémiologique exhaustive et transversale visant à déterminer la prévalence de silicose dans les mines de
fer, de plomb et de zinc au nord-ouest de la Tunisie. Un dépistage a été effectué par des radiographies du thorax 10 x 10, puis des radiographies standards ont été demandées pour les suspicions de silicose, avec spirométrie, questionnaire et examen clinique à visée respiratoire.

L'enquête a été effectuée en collaboration avec les services de pneumologie de l'hôpital Ariana de Tunis, durant la période 2001/2002. Le dépistage radiographique 10x10 a intéressé 79% des 571 travailleurs de la société minière. Dans 99 cas, une radiographie standard du thorax a été demandée. Elle a permis de retenir 11 cas de silicose (prevalence = 2,4%). Les caractéristiques de la population atteinte sont : âge moyen = 56 ans; durée moyenne d'exposition = 23 ans au fond; 8/11 ont occupé un poste de perforation. L'image radiologique observée est dans un cas très évoluée (3/3 pp uml), dans 7 cas évoluée (1/2, 2/1, 2/2 pp uml) et dans 3 cas débutante (1/1 pp). Dans deux cas, des séquelles de tuberculose étaient présentes. Les silicotoxiques ont été évacués de l’exposition.

Cette enquête, qui s’inscrit dans le cadre des dépistages de silicose entrepris régulièrement à l’échelle nationale depuis les années soixante-dix, a montré une nette régression de cette pathologie dans les mines du nord-ouest avec une prévalence qui est passée de 7% en 1984 à 2,4% en 2002.

Establishment of a national silicosis elimination programme in countries with silicosis exposure with the help of a model programme

Igor Fedotov, ILO and Greg Goldstein, WHO

A national action programme involves governmental agencies, industry and trade unions in collaborative action and establishes a sound infrastructure to combat silicosis. It provides a knowledge base and support to ensure systematic programme development for surveillance and preventive activities. A feasible prevention strategy requires a thorough knowledge of local conditions and the national situation, proven safety measures, and opportunities for innovations. The elements of a national programme include: laws and regulations, enforcement of occupational exposures and technical standards, governmental advisory services, an effective system of inspection, and a well-organized reporting system.

Establishment of a national elimination programme in countries with silicosis exposure with the help of model programme

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Keywords: silicosis, elimination, pneumoconiosis

Target Group: coalminers, quarry workers

The objective of this project is to identify and characterize exposure, and intervene to implement control strategies. A detailed characterization of the insurance status of workers will be formalized initially, as well as the characteristics of processes of risks that generate fibrogenic pneumoconiosis silicosis. Additionally the implantation of specific programmes like epidemiological surveillance of the environmental and biological behaviour of the exposition will be encouraged. The Ministry will lead the drawing up of these models. Program design is underway. The project is in search of funds. It is scheduled to be completed between 2002 and 2005.

Development of a comprehensive training package addressing the whole procedure of silicosis elimination, emphasizing the use of simple dust control methods and extension of protection to many workplaces

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Keywords: Preventative Technologies Toolbox pneumoconioses, occupational hygiene, work-related illness, Dust Control Toolkit, training package, dust control, silicosis elimination

Target group: all interested CCs over and beyond those who have currently expressed interest, decision-makers, planners and managers, officers in the Ministries of Health, Labour, and trade unions in China; directors, managers, team leaders, workers and occupational health staff of companies and enterprises associated with a risk of silicosis.

The objective of this project is to develop a comprehensive training package, in the form of a Dust Control Toolkit for the Preventative Technologies Toolbox. The goal of this is to disseminate knowledge and raise awareness on the principles and prevention of dust generation and control, and to promote the application of this knowledge into practical control solutions, by trade and occupational sector, applicable in developing countries and countries in transition. This process includes control banding principles, substitution, clean
technologies, and other practical solutions. A pamphlet of practical control technologies, by trade and occupational sector, for adaptation into a Dust Control Toolkit for use in developing countries and countries in transition, is being prepared. The objective of this project is to raise the awareness of dust control and silicosis elimination. It consists of a training package addressing the whole procedure of silicosis elimination, emphasizing the use of simple dust control methods and extension of protection to many workplaces. The package will cover an introduction to silicosis, the global silicosis situation in developed and developing countries, a brief review of the established approaches to prevention (dust control, health surveillance), and a brief history of the global programme to eliminate silicosis with a list of programme elements. The achievements so far have been the coordination of two-day symposia on silicosis to focus on practical solutions and dust control principles, to be presented in association with the ICOH Congress in February 2003. The culmination of the information associated with this symposium will be a starting point for ongoing collaboration between IOHA and WHO in the collecting of practical solutions and case studies. This process will enrich the WHO document through practical experience acquired through the IOHA and the expertise found within. In addition, the necessary first steps to move ahead the training package process were presented in a two day workshop on Control Banding hosted in London, UK on the 4th and 5th of November, 2002. At this workshop, the basic principles for developing an appropriate training strategy for developing countries, and those in transition, was presented.

A draft outline of the proposed brochure is being prepared, with content and format defined. Suitable photographs to illustrate the text are being sought. The project is funded in part by the Chinese Ministry of Health and the National Safety Council. WHO, ILO and the National Safety Council are collaborating on this project. It will be completed by 2005.

Other centres collaborating on the project are Japan (NIIH), China (Dehong Li), Viet Nam (NIOEH), Chile (ACS), Thailand (NICE + Dept. of PH), Russia (SCIOH), Bulgaria (NCHM), Serbia and Montenegro (IOPH), South Africa (NCOH) and India (NIOH).

**Preparation of a guideline on health surveillance of dust exposed workers**

Dehong Li, National Institutes in Occupational Health and Poison Control, China (Dehong@263.net)

*Keywords*: health surveillance, dust exposure

*Target Group*: mineral dust exposed workers

The purpose of this project is to clarify the requirements and methods of health surveillance for workers with dust exposure. A survey on the health surveillance practice in workers exposed to various kinds of mineral dust is on-going.

Funds have been provided by the Ministry of Sciences and Technology for 2003-2005.

**Organization of an international meeting to review the relationship between TB and silicosis**

David Rees, National Centre for Occupational Health, South Africa (reesd@health.gov.za)

Matti Huuskonen, Finnish Institute of Occupational Health, Finland (matti.huuskonen@occuphealth.fi)

H.N. Saiyed, National Institute of Occupational Health, India (saiyedhn@yahoo.com)

The National Institute of Occupational Health and Poison Control, Chinese Centres for Disease Prevention and Control, Beijing, is also interested in this activity.

Funds are only partially in place. The project is scheduled to be completed by 2003.

**Publication in the peer reviewed scientific literature of detailed and accurate exposure-response information for risks of silicosis, on which workplace standards can be based**

Colin Soutar, Institute of Occupational Medicine, UK (Colin.Soutar@IOMHQ.org.uk)

*Keywords*: silica, risks, silicosis

The objective of this project is to disseminate exposure-response information. It includes the publication in the peer review scientific literature of detailed and accurate exposure-response information for risks of silicosis, on which workplace standards can be based.

Funding is in place for this on-going project.

**International training workshops on the prevention of pneumoconioses**

Rachaneekorn Chomsuan, Ministry of Public Health, Thailand

Funding is in place except for expenses of international experts. The project is scheduled to be completed by November 2003.
Training for physicians in interpreting B reader X-rays
Fengsheng He, National Institutes in Occupational Health and Poison Control, China
(hefs@public.bta.net.cn)
Four training courses have been completed in 2002, with more than 200 participants. The project is funded by the Ministry of Health, China. It will be completed by 2005.

Spanish-language ILO radiology course
Gustavo Contreras, Asociación Chilena de Seguridad, (ACHS) Chile (fctgct@gw.achs.cl)
The course is complete and ready to be used for teaching professionals in the region. All the training material is ready and has been used several times.
The host country or Institution is required to provide the funds to support local arrangements and provide the facilities for the teaching. The Occupational Society of Argentina had requested for the course to be conducted. However the current situation in Argentina led to a postponement of the course. It is planned to provide the course in Chile. This event could be financed by a copper company. Other countries and institutions are invited to contact the project team for new courses.

The WHO/ILO Joint Effort in Occupational Health in Africa and practical steps towards the elimination of silicosis
Sophia Kisting, Occupational and Environmental Health Research Unit, School of Public Health and Primary Health Care, South Africa (skisting@cormack.uct.ac.za)
Keywords: African Joint Effort, disease elimination, silicosis, airborne dust
Target group: Policy makers, occupational health and safety staff in different government departments, Trade Unions, training and research institutions, representatives from industries where there is a risk of exposure to silica dust.
South Africa is one of the countries that are fortunately well placed to embark on a realistic national programme to eliminate silicosis. Challenges include:
• high prevalence of dust related lung diseases among miners, ex-miners and workers in non-mining silica dust industries
• known link between silica dust exposure and tuberculosis (TB)
• high prevalence of TB in South Africa as well as the increasing risk of TB because of the HIV/AIDS pandemic
• link between silica dust exposure and cancer as confirmed by the International Agency for Research on Cancer (IARC)
• ongoing exposure to silica dust and efforts to control this
• the need for one standard with regards to silica exposure limits
• gender concerns in silicosis
• collaboration among role-players on preventive measures
Strengths include:
• an enabling constitution
• host to the October 2002 World Summit on Sustainable Development (WSSD)
• the existence, since 1994, of a strengthened occupational and environmental health and safety legislative framework
• rich experience of trade unions working towards better occupational and environmental health and safety
• participation of government in multi-stakeholder projects to reduce occupational and environment risks (e.g. Asbestos Summit 1998)
• capacity and willingness within industry to reduce dust levels and implement medical surveillance programmes
• academic institutions with sound experience in teaching as well as participatory and intervention research

The purpose of the project is to raise awareness among health service providers concerning the important relationship between silica dust exposure and the development of Tuberculosis; to assist with the co-ordination of multi-stakeholder workshops to share information and experience with regards to the
elimination of silicosis; to assist with the co-ordination of the training of health service providers in the use of the ILO Standard X-rays for the diagnosis of pneumoconiosis.

The following progress has been made:

- The Advisory Council for Occupational Health (ACOHS) discussed the elimination South Africa in its 2002 meetings.
- A multi-stakeholder planning meeting to discuss the elimination of silicosis took place on 22 January 2003. Information was exchanged and plans made to take the process forward in a participatory way.
- At the International Union Against Tuberculosis and Lung Diseases (IUATLD) Africa Region conference in Durban in June 2002, a paper presented on the elimination of silicosis in the prevention of TB resulted in nurses in some TB clinics asking about silica dust exposure among their TB patients.
- Greater awareness about the ILO/WHO Global Elimination of silicosis

Meetings with members of the National Institute of Working Life (NIWL) in Sweden concerning a pilot course they designed on airborne dust control resulted in the hosting of 2 pilot workshops on airborne dust for participants from Southern Africa.

- At the October 2002 meeting of the Global Health Research Forum of WHO, a paper was presented on the role of the WHO/ILO Joint Effort in OHS in Africa with a focus on silica dust elimination.
- In August 2001, Dr Greg Goldstein of the WHO and Dr Kisting raised with each one of the Joint Effort partners the possibility of collaboration on silicosis elimination programmes.

In collaboration with the National Institute of Working Life (NIWL), UCT and NCOH are conducting two pilot workshops in March 2003 on airborne dust control. A meeting of South African stakeholders is planned to discuss elimination of silicosis with participation of all role-players.

Prevention of asbestos-related disorders in Asia

Ken Takahashi Dept. of Environmental Epidemiology, Institute of Industrial Ecological Sciences (IIES), University of Occupational & Environmental Health, Japan (ktaka@med.uoeh-u.ac.jp)

Keywords: asbestos, Asia, global asbestos epidemic, descriptive statistics, country reports

Target group: Though formulated mostly by the scientific community the message needs to be directed to administration, politicians, employers and employees as well as society at large.

The objective of this project is to assess the overall situation of each country and region regarding asbestos issues using descriptive status on exposure and disease status. Macro-indicators considered allow comparison within the region as well as with Western countries. The goal is first to collect information, summarize in a comparable form, and then share it globally. The synopsis of the results foreseen will be presented in variable forms. There is a possibility that a follow-up meeting will be organized.

An “Asbestos Symposium for the Asian Countries” was organized with support from WHO-WPRO and ILO, which brought together over 25 delegates from 11 countries from the Asian region and 5 delegates from Europe. This was a joint effort by UOEH and FIOH, co-sponsored by ICOH-SC on Respiratory Disorders and supported by WHO and ILO. In this Symposium, in addition to the keynote lecturers from Finland, Sweden, and Japan, there were Country Reporters (at least two from each country) to discuss the relevant country situations of China, East Timor, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Thailand, and Viet Nam. An international delegate participated via an Internet video conference. Through the exchange of experiences in both developed and developing countries, an initiative was developed to "map" the overall situation in the region as well as to formulate possible solutions to cope with the health hazards of asbestos.

Country reports were produced for 11 countries. Printing of Proceedings has now been completed. The conference was co-organized by the Finnish Institute of Occupational Health, and supported by WHO-WPRO, ILO, and ICOH-SC on Respiratory Disorders.

A speech was delivered by Takahashi at the Asian Conference of Occupational Health in Taiwan, Nov 1-4 2002.

Monitoring of respiratory effects in workers occupationally exposed to asbestos

Jindřiška Lebedová, National Institute of Public Health, Czech Republic (jindra.lebedova@lf1.cuni.cz)

Keywords: asbestos exposure, respiratory impairment, chest X-ray
Target group: Persons occupationally exposed to asbestos in refining plants in the Czech Republic 1950 – 2002. The group mainly comprises ex-employees who were mostly exposed to chryzotil and, to a lesser extent, krociodil.

The purpose of the project is to establish a proposal for recommendations for indication of a detailed radiological examination of persons occupationally exposed to asbestos with minimal changes visible on a frontal chest x-ray. This includes monitoring of the relationship between exposure, latency, subjective complaints and pulmonary dysfunction in persons occupationally exposed to asbestos. Data analysed in relation to findings on a frontal chest x-ray or HRCT. Results are to be used for writing recommendations for indication of a detailed radiological examination of these persons, with a view to health and economic aspects.

So far, a group of 112 people with previous occupational exposure to asbestos and without any parenchymal changes on the chest X-ray was examined. The preliminary results show that people with pleural or parenchymal changes on the HRCT had a decrease in total lung capacity (TLC), slow vital capacity (VC) and forced vital capacity (FVC), forced expiratory flow from 25-75% of the FVC (FEF_{25-75}%), forced expiratory flow from 75% of the FVC (FEF_{75}%), and diffusing capacity of carbon monoxide (DLCO). This effect was observed also when chest X-ray was without any pathological changes. During the period between 2003 and 2004 we will continue with accumulating data, continuous analysis and evaluation.

The project is funded by the Ministry of Health of the Czech Republic. The Department of Occupational Medicine of the 1st Faculty of Medicine, Charles University and General Teaching Hospital, Prague, as well as the Department of Biostatistics and Informatics of the National Institute of Public Health, Prague, are collaborating on the project.

The planned outcome of the project is a publication of recommendations for the indication of a detailed radiological examination of persons occupationally exposed to asbestos, who have only minimal changes on a frontal chest X-ray.

The final analysis and evaluation will be conducted in 2005.

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**Intervention study to reducing risk of respiratory diseases among foundry workers**

Nguyen Khac Hai, National Institute of Occupational and Environmental Health, WHO Collaborating Center on Occupational Health, Vietnam (haink@hn.vnn.vn)

**Keywords:** respirator, foundry, silicosis, respiratory, worker education, standard, intervention

**Target group:** academic institutions, Agency for standard and qualitative measurement, Occupational medicine center for industry

The main objective of this project is to reduce the risk of respiratory diseases among foundry workers. Funds have been secured by WHO.

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**Network on mining and child labour**

Susan Gunn, ILO/IPEC (gunn@ilo.org)

Funding for this on-going project is partially in place. WHO Collaborating Centres will be approached to participate and support the networks in their regions and areas of interest.

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**Other projects related to pneumoconioses and asbestosis**

Yuri I. Kundiev Institute of Occupational Health, Ukraine (basanets@ioh-ams.kiev.ua)

Robert Cohen, Great Lakes Centres for Global Environmental and Occupational Health, University of Illinois in Chicago, USA (bobcohen@uic.edu)

**Keywords:** Respiratory disease, coal miners, Ukraine, occupational respirable dust exposure.

**Target group:** decision-makers and occupational health staff in the Ministry of Health, Fund of Social Insurance from Work Accidents and Occupational Diseases, directors and managers of mines, mining union safety officials.

The objective of this project is a) to raise awareness among decision-makers and occupational health staff in the Ministry of Health, Fund of Social Insurance from Work Accidents and Occupational Diseases, directors and managers of mines associated with a risk of pneumoconiosis; b) to reduce high dust exposure in underground coal mines and c) to decrease prevalence of pneumoconioses in coal miners.

The project includes the following elements:

- To develop a surveillance programme to determine the prevalence of occupational lung diseases in a random sample of 700 coal miners taken from a cohort of 7000 active coal miners in three coal mines.
Gather occupational, smoking and clinical history, demographic and diagnostic information for miners.

Evaluate the prevalence and severity of lung diseases in miners:
- determine the prevalence and severity of lung function impairment using standardized spirometry testing;
- determine the prevalence of respiratory symptoms using a standardized questionnaire;
- determine the prevalence of chest radiograph positive pneumoconiosis;
- evaluate the use of spirometry as a medical tool;
- gather baseline data that could be used in a longitudinal study of lung function to determine incidence of accelerated decline of lung function in the population.

Obtain coal mine dust sampling data.

Make recommendation to improve current surveillance programmes for occupational lung diseases and assist the appropriate agencies/programmes in the implementing these recommendations.

The following observations have been made so far:

Rates of radiologic pneumoconiosis, ILO category 1/0 or greater, were found to be 1.32 to 2.75 times the U.S. levels of 2.8%. Seven percent of miners had significant impairment of FEV1, and 13% had obstructive impairment defined as a low FEV1/FVC ratio. Ten percent of miners reported symptoms or shortness of breath and chronic bronchitis. Rates of pneumoconiosis, lung function impairment, and respiratory symptoms appear to be relatively low compared to levels of dust exposure documented in Ukrainian coalmines. This may be the result of a significant healthy worker effect. Further analysis of the relationship between coal mine dust exposure and smoking history to outcome measures is being performed.

Dust sampling revealed levels of respirable dust collected during mining with a geometric mean of 5.27 mg/m³ (GSD 2.6). The geometric mean for all samples of respirable quartz collected during mining was 75.7 µg/m³ (GSD 3.1). Seventy-five percent of all personal samples exceeded the U.S. occupational exposure limit. Coalmine dust levels in Ukrainian coal mines are significantly higher than the US PEL. High concentrations of quartz were found in these mines. Prolonged exposure at these levels could cause significant rates of pneumoconiosis and respiratory impairment.

2 presentations at ATS, published in the American Journal of Respiratory and Critical Care Medicine in April 2002. The pilot stage was initiated in September 2000, and finished in September 2002. The new forseen completion date of main stage is 2006. The Scientific Research Institute of Medico-Ecological Problems of Donbass and Coal Mining Industry, Donetsk, Ukraine, (Director: Vladimir Mukhin) is collaborating on the project.

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**Provision of a model national programme with indicators addressing the size of the silicosis problem and progress of the national programme**

Le Van Trung, National Institute of Occupational and Environmental Health, Viet Nam (letrung@hn.vnn.vn)

This on-going project is in search of funds.

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**Health risk assessment and development of intervention programme in cottage industries with high risk of silicosis**

H.N. Saiyed (saiyedh@yahoo.com), National Institute of Occupational Health, Ahmedabad, India.

*Keywords*: Agate industry, quartz grinding industry, stone quarries, dust control system.

*Target groups*: Policy makers, owners, workers, medical officers working in the industry, trade unions, health personnel particularly those connected with tuberculosis programmes, general public with emphasis on people living in the surrounding of the high risk industry.

The purpose of the project is to generate data on silica exposure related morbidity and mortality in cottage industries with high risk of silicosis and to develop intervention programme. This project is the part of National Silicosis Elimination Programme which has following components.

- Identification of industries with high risk of silicosis through literature survey, and field surveys.
- Develop strategy for prevention and control of silicosis and other silica exposure related health problems which will consist of (a) Generation of awareness; (b) Development of dust control system (c). Development of trained man power.

So far, data has been generated on environmental conditions and morbidity due to silica exposure in (a) agate industry (b) quartz grinding industry (c) stone quarries. Dust control systems have been developed and successfully installed for the agate industry. For two other industries namely stone crushing and stone mining it is on the way. Several awareness programmes have been completed for various target groups.
Brochures and video films for various target groups have been prepared and distributed. Training programmes for medical personnel and other target group have also been organized.

Other Centres that collaborate on the project are the Director General Mines Safety, Government of India; Desert Medicine Research Centre, Jodhpur, India; Chief Inspectors of Factories Gujarat and Rajasthan State; Director General, Labour Institute, Mumbai.

**Training of occupational health physicians and other experts working in industries with the risk of silicosis**

H.N. Saiyed (saiyedhn@yahoo.com), National Institute of Occupational Health, Ahmedabad, India

**Target groups:** Medical officers working in mining and surface industries with risk of silicosis and other dust related occupational lung diseases. Medical officers practicing near the high risk industry.

The purpose of the project is to develop man power for the diagnosis of silicosis and dust related occupational diseases. This project is the part of National Silicosis Elimination Programme which has following components:

- Identification of industries with high risk of silicosis through literature survey, and field survey.
- Develop strategy for prevention and control of silicosis and other silica exposure related health problems which will consist of (a) Generation of awareness; (b) Development of dust control system (c). Development of trained man power.

So far a training programme has been organized for the medical officers at Ahmedabad (NIOH), Jodhpur (DMRC) and Dhanbad (for medical officers working in mines by Director general mines safety in collaboration with ILO and Indian Association of Occupational Health).

Other Centres collaborating on the project are the Director General Mines Safety, Government of India; Desert Medicine Research Centre (DMRC), Jodhpur, India; Chief Inspectors of Factories Gujarat and Rajasthan State.

**Documentation of methodologies and iconographical materials related to Phase contrast light microscopy and powder diffractometry**

Vito Foà, Istituti Clinici di Perfezionamento, Dipartimento di Medicina del Lavoro e Sicurezza negli Ambienti di Lavoro e Consorzio ISPESL/ICP per il Centro di Collaborazione con l’OMS per la Medicina del lavoro e l’Igiene Industriale (omscons@unimi.it)

**Keywords:** asbestos, silica, X-ray diffraction (XRD), Phase Contrast Optical Microscopy (PCOM).

**Target group:** occupational Health Physicians, industrial hygiene professionals, researchers, laboratory technicians.

An atlas and a CD-Rom have been published in Italian with legends translated in English (La Medicina del Lavoro 2001; vol. 92 (suppl), Casa Editrice Mattioli, Fidenza).

The Atlas presents the evolution of research activity in the last 50 years on solid airborne contaminants originating mainly from the industrial treatment of silica, silicate and asbestos materials, and the methodologies adopted in the Toxicology and Industrial Hygiene Laboratory (Clinica del Lavoro “L. Devoto”) for the characterization of crystalline free silica, asbestos and substitutive fibres. It offers a wide documentation of technical schedules, diffractograms and microphotographs (using Phase Contrast Optical Microscopy with the Dispersion Staining Method). It mostly covers the results of scientific studies made in the last 60 years at the Institute of Occupational Health, now Department of Occupational Health, of the Clinica del Lavoro “Luigi Devoto” of the University of Milan, although ample space is also given to the results of studies performed by well known research workers in Italy and from all over the world.

The first chapter concerns sampling, measurement and analysis of various types of silica and silicate materials, either raw or in the form of airborne dusts in the working environment, with special attention to determination via chemical, diffractometric and microscopic techniques of free crystalline silica in its various allotropic forms, according to the methods used in the Laboratory of Industrial Hygiene and Toxicology of the Clinica del Lavoro of Milano.

Chapter 2 describes the evolution of sampling and counting methods of airborne fibres of various types of asbestos, and also the methods of identification and qualitative discrimination of fibres used as a substitute for asbestos which were developed in the mentioned Laboratory.

Chapter 3 consists of a photomicrographic and diffractometric atlas illustrating the results of analyses of materials and dusts containing silica, asbestos and asbestos substitute fibres.
Caratterizzazione di polveri e fibre aerodisperse con particolare riguardo alla silice ed agli amianti

Vito Foà, Istituti Clinici di Perfezionamento, Dipartimento di Medicina del Lavoro e Sicurezza negli Ambienti di Lavoro e Consorzio ISPESL/ICP per il Centro di Collaborazione con l’OMS per la Medicina del lavoro e l’Igiene Industriale (omscons@unimi.it)

Parole chiave: silice, amianti, diffrattometria per polveri, microscopia ottica a contrasto di fase, fotomicrofografia

Utenza destinatana: Medici del Lavoro, Igienisti Industriali, Ricercatori e Tecnici di Laboratorio.

Pubblicato in italiano, con didascalie tradotte in lingua inglese su "la Medicina del Lavoro" 2001; vol. 92 (suppl), Casa Editrice Mattioli, Fidenza

La pubblicazione presenta in sintesi l’evoluzione dell'attività di ricerca sulle polveri minerali aerodisperse in quest'ultimo mezzo secolo di lavoro e illustra nel dettaglio le metodiche analitiche attualmente adottate nel Laboratorio della Sezione di Igiene e Tossicologia Industriale della Clinica del Lavoro “Luigi Devoto” di Milano per la caratterizzazione della silice libera cristallina, degli amianti e delle fibre sostitutive.

È presentata un’ampia documentazione di schede tecniche, spettri da diffrazione di polveri e fotomicrografie al microscopio ottico a contrasto di fase in dispersione cromatica.

Il lavoro riporta l’evoluzione dell'attività di ricerca svoltasi nell’ambito dello studio dei contaminanti solidi aerodispersi, originati principalmente dal trattamento industriale dei materiali silicei, silicatì ed amiantiferi.

Sono essenzialmente considerati i risultati dei lavori scientifici conseguiti negli ultimi 60 anni nell’Istituto di Medicina del Lavoro, ora Dipartimento di Medicina del Lavoro Clinica “L. Devoto”, dell’Università degli Studi di Milano, senza peraltro trascurare quelli raggiunti da i più noti studiosi italiani e stranieri nell’ambito specifico.

Il primo capitolo riguarda il prelievo, la misura e l’analisi di vari tipi di materiali silicei e silicatì, grezzi o in polveri aerodisperse negli ambienti di lavoro, con particolare riguardo alla determinazione per via chimica, diffrattometrica e microscopica della silice libera cristallina nelle sue varie forme allotropiche, secondo le metodiche adottate dal Laboratorio di Igiene e Tossicologia Industriale della Clinica del Lavoro di Milano.

Il secondo capitolo fa riferimento all’evoluzione dei metodi di prelievo e di conteggio delle fibre aerodisperse dei vari tipi di amianto, nonché ai metodi di individuazione e discriminazione qualitativa delle fibre sostitutive dell’amianto, messi a punto nel predetto Laboratorio.

Nel terzo capitolo è riportato un atlante fotomicrografico e diffrattometrico illustrativo dei risultati analitici su materiali e polveri contenenti silice, amianto e fibre alternative.

Silicosis Elimination Programme in Thailand

Ministry of Public Health, Thailand (person responsible is to be appointed)

This project is funded by the Government of Thailand. It will be completed before 2005.

A National action plan on silicosis prevention and elimination in Vietnam

Nguyen Thi Hong Tu, Ministry of Health, Vietnam (hongtu@netnam.vn)

Keywords: Silicosis, prevention, elimination, workers, silica dust, medical surveillance, detection, training

Target group: decision-makers at Ministries, employers’ organizations, academic institutions

The objective is to reduce annual incidence of silicosis and eliminate silicosis in Viet Nam by the year 2020.

The programme was started in 1999 at ministry level. With the multi-sectoral implementation mechanism, the programme has achieved the response and active participation of employers, employees, as well as support from governmental and international organizations (ILO, WHO, SIDA-Sweden, Washington University). In 2002, the programme was recognized as a National Programme of Silicosis Elimination.

A mechanism for the elimination of silicosis at the enterprise level will be institutionalized in the legislation. This will require that employers increase their investment in reducing dust in the work environment and take care of workers' health.

Fund have been secured by ILO, Vietnam Government, but the programme on silicosis prevention needs further support from international organization and industries in order to reach the new goals of the programme in the coming years.

Assessment of actual situation of silicosis diagnosis by X-ray film1980 in Vietnam

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La caratterizzazione di polveri e fibre aerodisperse con particolare riguardo alla silice ed agli amianti

Vito Foà, Istituti Clinici di Perfezionamento, Dipartimento di Medicina del Lavoro e Sicurezza negli Ambienti di Lavoro e Consorzio ISPESL/ICP per il Centro di Collaborazione con l’OMS per la Medicina del lavoro e l’Igiene Industriale (omscons@unimi.it)

Parole chiave: silice, amianti, diffrattometria per polveri, microscopia ottica a contrasto di fase, fotomicrofografia

Utenza destinatana: Medici del Lavoro, Igienisti Industriali, Ricercatori e Tecnici di Laboratorio.

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Il lavoro riporta l’evoluzione dell'attività di ricerca svoltasi nell’ambito dello studio dei contaminanti solidi aerodispersi, originati principalmente dal trattamento industriale dei materiali silicei, silicatì ed amiantiferi.

Sono essenzialmente considerati i risultati dei lavori scientifici conseguiti negli ultimi 60 anni nell’Istituto di Medicina del Lavoro, ora Dipartimento di Medicina del Lavoro Clinica “L. Devoto”, dell’Università degli Studi di Milano, senza peraltro trascurare quelli raggiunti da i più noti studiosi italiani e stranieri nell’ambito specifico.

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Silicosis Elimination Programme in Thailand

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Nguyen Thi Hong Tu, Ministry of Health, Vietnam (hongtu@netnam.vn)

Keywords: Silicosis, prevention, elimination, workers, silica dust, medical surveillance, detection, training

Target group: decision-makers at Ministries, employers’ organizations, academic institutions

The objective is to reduce annual incidence of silicosis and eliminate silicosis in Viet Nam by the year 2020.

The programme was started in 1999 at ministry level. With the multi-sectoral implementation mechanism, the programme has achieved the response and active participation of employers, employees, as well as support from governmental and international organizations (ILO, WHO, SIDA-Sweden, Washington University). In 2002, the programme was recognized as a National Programme of Silicosis Elimination.

A mechanism for the elimination of silicosis at the enterprise level will be institutionalized in the legislation. This will require that employers increase their investment in reducing dust in the work environment and take care of workers' health.

Fund have been secured by ILO, Vietnam Government, but the programme on silicosis prevention needs further support from international organization and industries in order to reach the new goals of the programme in the coming years.

Assessment of actual situation of silicosis diagnosis by X-ray film1980 in Vietnam
Nguyen Thi Hong Tu, Ministry of Health, Viet Nam (hongtu@netnam.vn)

*Keywords:* Silicosis, diagnosis, workers, silica dust, detection, X-ray film  
*Target group:* decision-makers at Ministries, employers’ organizations, academic institutions

The objective of this project is to identify capacity of national and provincial occupational health workers in diagnosis of silicosis using X-ray film 1980. The project will start in 2004 and funds have been secured by WHO, Vietnam Government, ILO.

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**Training workshop on interpreting radiographs of pneumoconiosis using ILO classification 2000**

Nguyen Thi Hong Tu, Ministry of Health, Viet Nam (hongtu@netnam.vn)

*Keywords:* silicosis, diagnosis, workers, silica dust, detection, X-ray film  
*Target group:* decision-makers at ministries, academic institutions

The objective of this project is to provide and improve knowledge and capacity of national and provincial occupational health workers in diagnosis of silicosis using ILO international classification of radiographs of pneumoconiosis 2000. The project will start in 2004 and funds have been secured by WHO, Vietnam government, ILO.

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**Contribution to the national programme on elimination of silicosis in South Africa and silicosis in Southern Africa**

David Rees, Occupational Medicine Section, National Centre on Occupational Health, South Africa (reesd@health.gov.za)

Funds have been applied for. The first stage of the project will be completed in 2003.

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**Training for physicians in interpreting X-ray film reading**

Le Van Trung, Institute of Occupational and Environmental Health, Viet Nam (letrung@hn.vnn.vn)

This project is in search of funds.

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**Coal workers pneumoconiosis in Russia**

Nikolai Izmerov, RAMS Institute of Occupational Health, Russian Federation (izmerov@rinet.ru)

In collaboration with the Novokuznetsk Institute of Occupational Health

The project is in search of funds. It is scheduled to be completed by June 2003.

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**Asbestos related disorders in Serbia and Montenegro**

Bogoljub Perunicic, Institute of Occupational and Radiological Health, Serbia and Montenegro (perunb@Eunet.yu)

The project is in search of funds. It is scheduled to be completed by December 2004.

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**Occupational lung disease in Japan, Korea and China**

Yasuo Morimoto, University of Occupational and Environmental Health, Japan (yasuom@med.uoeh-u.ac.jp)

Completion date is December 2004

Funding has been secured and the project is proceeding as planned. The project will be scientifically supported by Korea-Japan-China joint conference on occupational health.

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**Evaluation of health effects due to occupational and environmental exposure to asbestos**

Neonila Szeszenia-Dabrowska (neonila@imp.lodz.pl) and Stanislaw Tarkowski (tarko@imp.lodz.pl), Nofer Institute of Occupational Medicine, Poland

*Keywords:* asbestos, cancer risk, environmental exposure, occupational exposure, epidemiology

The aim of the study is to assess the risk of asbestos-related malignancies among persons with diagnosed asbestosis. According to the Act of Parliament passed in 1997, manufacture and sale of asbestos-containing materials is prohibited in Poland since 1998. Thus, problems of asbestos dust level assessment and monitoring of health condition of people employed in the majority of asbestos-processing plants shall...
become irrelevant. However, the problems of delayed health effects attributable to the past occupational exposures shall continue. Environmental pollution from asbestos waste landfills in the vicinity of asbestos plants and asbestos-cement plants, where considerable concentrations of asbestos fibres in the ambient air are recorded will also continue to be a serious problem.

The project consists of the following tasks:

1. Monitoring of incidence of asbestos-related occupational diseases using the National Registry of Occupational Diseases as the basis: the incidence of asbestos-related occupational diseases in Poland has been monitored since 1972. In 2002, 111 cases of asbestosis, 28 cases of lung cancer and 10 cases of pleural mesothelioma were recorded.

2. Observation of the cohort composed of workers compensated for asbestosis: the study covered a cohort composed of 907 men and 490 women afflicted by asbestosis, diagnosed in 1970-1997. In all, 421 deaths were registered and causes of death were retrieved for 93.3% of the deceased. Taking into account a cumulative dose of fibers, it was found that a significantly increased mortality from lung cancer and pleural mesothelioma applied to persons exposed to a dose above 25 f-y/ml.

3. Observation of the cohort composed of asbestos-processing plant workers: the study revealed elevated mortality from malignant neoplasms, including lung cancer (men: 102 deaths, SMR = 126, 95%CI: 103-153; women: 18 deaths, SMR = 259, 95%CI: 153-409) and pleural mesothelioma (men: 2 deaths, SMR = 510, 95%CI: 62-1842; women: 3 deaths, SMR = 2033, 95%CI: 419-5941).

4. Medical examinations (screening) among former workers of asbestos-processing plants: the data obtained will serve as a basis for assessing the morbidity and incidence of asbestos-related diseases among persons occupationally exposed to asbestos dust in asbestos processing plants.

Preliminary results have been obtained. The final data will serve as a basis for assessing the morbidity and incidence of asbestos-related diseases among persons occupationally exposed to asbestos dust in asbestos processing plants.

Two publications were issued:


Asbestos-related diseases in Russia

Nikolai Izmerov, RAMS Institute of Occupational Health, Russian Federation (e-mail: izmerov@rinet.ru)

In collaboration with the Ekaterinburg Centre for the Prevention of Workers' Health, Ekaterinburg, Russia

This project is in search of funds.

For cross references see also:

TF 3: Occupational health problems, evaluation and control; Child labour/adolescent workers – Occupational health problems, evaluation and control

TF 4: Contributing information on interventions to reduce silica exposure

TF 10: Further development of PACE (India)

TF 14: Evaluation of the cost-effectiveness of interventions to reduce occupational exposure to Silica